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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,887	09/30/2003	Bernard Greenberg	4003/003	9221

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EXAMINER

LAWRENCE JR, FRANK M

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 02/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/674,887

Applicant(s)

GREENBERG, BERNARD

Examiner

Frank M. Lawrence

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) 35-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 and 38-50 is/are rejected.
- 7) ☒ Claim(s) 35-38 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities: A brief description of the drawing figures is required in the specification.

Appropriate correction is required.

### ***Claim Objections***

2. Claim 38 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 38 recites a process for the removal of nitrate-N, which is already covered in section (a) of claim 1.

3. Claim 18 is objected to because of the following informalities: In lines 9 and 13 of claim 18, "anoxic" should be changed to "anodic". Appropriate correction is required.

4. Claims 35-37 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim must refer to other claims only in the alternative. See MPEP § 608.01(n). Accordingly, the claims 35-37 have not been further treated on the merits. This objection can be overcome by changing "claim 1 and claim 18" to "claim 1 or claim 18" in each instance.

### ***Specification***

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The recitations concerning chlorine, ozone, UV, electrolytic disinfection,

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other disinfection methods (claim 41), and colloids containing toxic matter or combinations of inorganic or organic constituents in claims 1 and 39-50 do not have proper antecedent basis in the specification.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-34 and 38-50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 1 recites the limitation "the high pH" in line 6. There is insufficient antecedent basis for this limitation in the claim.

9. Claims 5 and 22 each recites the limitation "the existing membrane" in line 2. There is insufficient antecedent basis for this limitation in the claims.

10. Claims 7 and 24 each recites the limitation "the electrolytic cell" in line 2. There is insufficient antecedent basis for this limitation in the claim.

11. Claims 7 and 24 each recites the limitation "the carbonate film" in line 2. There is insufficient antecedent basis for this limitation in the claim.

12. Claims 7 and 24 each recites the limitation "the special cathode surface" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

13. Claim 12 recites the limitation "the drinking water process" in line 1. There is insufficient antecedent basis for this limitation in the claim.

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14. Claim 18 recites the limitation "the receiving water" in line 13. There is insufficient antecedent basis for this limitation in the claim.

15. Claims 24 and 29 each recites the limitation "the pollution removal process" in line 1. There is insufficient antecedent basis for this limitation in the claim.

16. The remaining rejected claims are indefinite for depending from a rejected parent claim.

***Claim Rejections - 35 USC § 102***

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

18. Claims 12, 29 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Farmer (5,425,858).

19. Farmer '858 teaches a process for removing ionized contaminants from domestic water comprising providing a stack of electrolytic cells (see abstract, figure 3, col. 5, lines 31-36, col. 10, lines 4-36).

20. Claims 7 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Cho (5,916,490).

21. Cho '490 teaches a process for treating tap water in a humidifier, comprising periodically reversing the polarity of an electrolytic cell to remove a carbonate film on a cathode surface (see abstract, col. 3, lines 24-29).

***Claim Rejections - 35 USC § 103***

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

23. Claims 8 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cho '490 in view of Twardowski (5,277,768).

24. Cho '490 discloses all of the limitations of the claims except that acid is periodically added to dissolve the carbonate film. Twardowski '768 discloses a method for cleaning an electrolytic cell comprising dissolving carbonate scale on a cathode and membrane by the addition of a mild acid solution (see abstract, col. 1, lines 10-40). It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the process of Cho '490 by using an acid addition step in order to provide electrode cleaning without the need for shutting down the cell.

***Allowable Subject Matter***

25. Claims 1 and 18 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

26. Claims 2-6, 9-11, 13-17, 19-23, 26-28, 31-34 and 39-50 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

27. The following is an examiner's statement of reasons for allowance: The prior art of record fails to disclose a process for removing nitrate nitrogen, phosphorous and microbial life,

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and aggregating colloids of turbidity and color in water, comprising treating the water in a cathode chamber of an electrolytic cell followed by filtering and oxidation in an anodic part of the cell.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional references listed on the attached PTO-892 form disclose electrolytic water treatment systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank M. Lawrence whose telephone number is 571-272-1161. The examiner can normally be reached on Mon-Thurs 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frank M. Lawrence  
Primary Examiner  
Art Unit 1724

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*Frank Lawrence*  
1-12-05